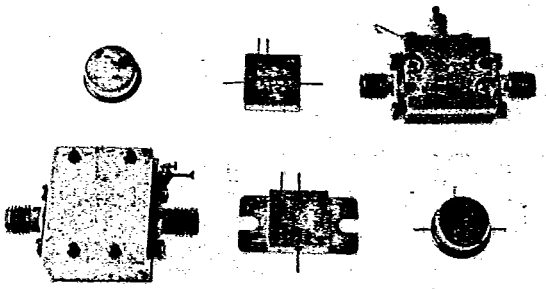
AH-9

T-74-09-01



5 to 500 MHz TO-8 Cascadable Amplifier

- High Output: +23dBm
- Third Order: +35dBm
- **Various Package Options (see photo)**
  Surface Mounted (SMTO-8), Flatpack with flange (FPF), Connectorized (CAH), Connectorized Flatpack (CFP), Flatpack (FP), and TO-8 (AH)

Electrical Specifications

Measured in a 50-ohm system at +24 Vdc nominal

Characteristic	Typical 25°C	Guaranteed 0°C to +50°C	Specifications −54°C to +71°C
Frequency (MHz Min.)	5-500	5-500	5-500
Small Signal Gain (dB Min.)	+12.0	+11.0	+10.5
Gain Flatness (dB Max.)	±0.3	±1.0	±1.0
Noise Figure (dB Max.)	+6.0	+8.0	+8.5
Power Output @ 1 dB Compression (dBm Min.)	+23.0	+22.0	+20.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+35.0	+33.0	+30.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+47.0	+45.0	+40.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+52.0	+50.0	+45.0
Input/Output VSWR (Max.)	<2.0:1	2.0:1	2.0:1
DC Current at 24 V (mA Max.)	+110.0	+121.0	+127.0

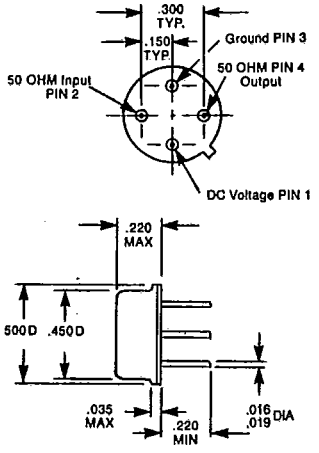
Maximum Ratings

Ambient Operating Temperature ..... −54°C to +71°C
Storage Temperature ... −65°C to +125°C
Maximum Case Temperature ..... +80°C
Maximum DC Voltage ..... +25.0V
Maximum Continuous RF Input Power ..... +15.0dBm
Maximum Short Term RF Input Power ..... +10.0 mW (1 minute Max.)
Maximum Peak Power ..... +0.5W (3µseconds Max.)
"X" Series Burn-In Temperature ..... +71°C
Weight ..... +2.5 grams Max.

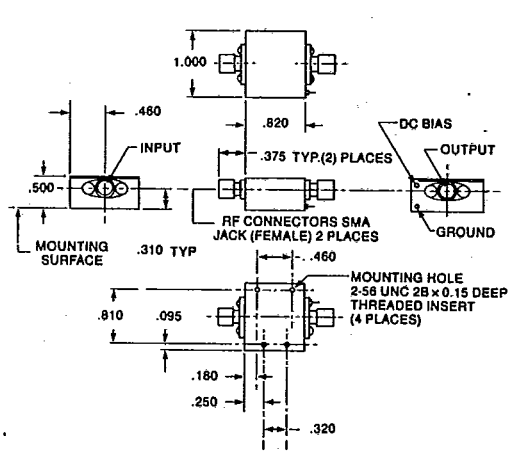
Outline Drawings

(For additional package configurations, see Section 9)

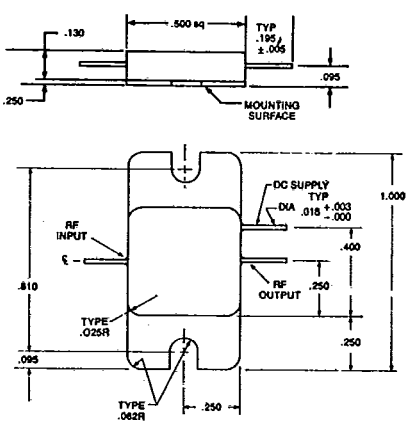
AH-9



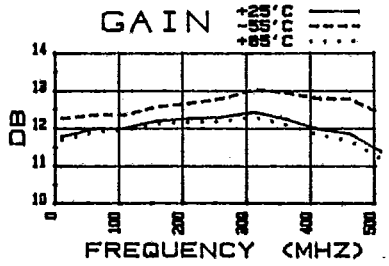
CAH-9

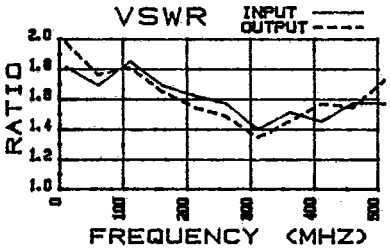


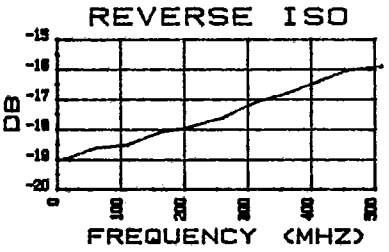
FPF-9

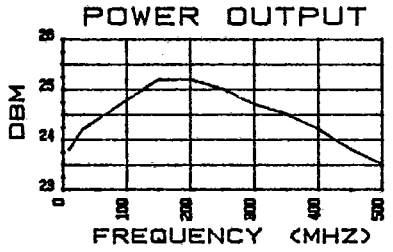


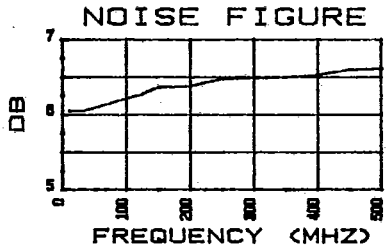
Typical Performance

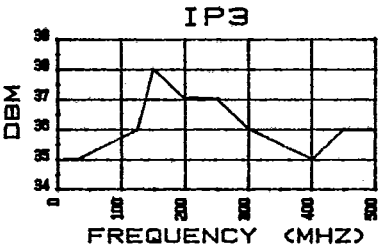


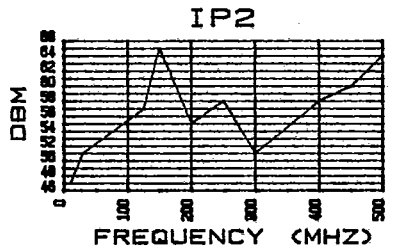


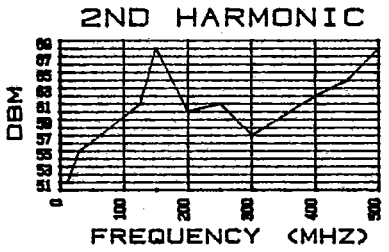












AH-9 *107.4 mA* @24.0Vdc
Linear S-Parameters

FREQUENCY	RETURN LOSS INPUT (S11)		TRANS. GAIN FORWARD (S21)		TRANS. GAIN REVERSE (S12)		RETURN LOSS OUTPUT (S22)	
MHz	dB	ANG	dB	ANG	dB	ANG	dB	ANG
10.000	-10.8	-148.0	11.77	-171.8	-19.00	6.8	-9.7	165.3
60.000	-11.8	169.0	11.99	163.3	-18.60	2.3	-11.2	165.8
110.000	-10.5	159.5	12.01	144.3	-18.50	-0.5	-10.8	166.0
160.000	-11.8	148.3	12.21	128.0	-18.10	-0.2	-12.2	159.3
210.000	-12.5	140.8	12.27	109.5	-17.90	-3.3	-13.4	158.3
260.000	-13.1	137.5	12.30	91.5	-17.60	-5.5	-14.2	159.0
310.000	-15.6	129.8	12.43	73.8	-17.10	-8.2	-16.7	176.8
360.000	-13.8	118.8	12.24	54.8	-16.80	-12.5	-14.7	165.8
410.000	-14.7	104.5	11.98	36.5	-16.40	-17.2	-13.1	-176.5
460.000	-13.0	94.0	11.85	18.0	-16.00	-22.0	-13.4	171.0
510.000	-13.1	82.3	11.37	-1.0	-15.90	-28.8	-11.5	176.0

Deviation from Linear Phase, Gain, Group Delay, and VSWR

FREQUENCY (MHz)	VSWR INPUT	DEV. LIN. 0 (DEG.)	GAIN DEV. (dB)	GROUP DELAY (n-SEC)	VSWR OUTPUT
10.000	1.811	4.330	-0.268	0.000	1.973
60.000	1.692	-2.191	-0.048	1.389	1.760
110.000	1.851	-2.711	-0.028	1.056	1.811
160.000	1.692	-0.482	0.172	0.903	1.651
210.000	1.622	-0.502	0.232	1.028	1.544
260.000	1.568	-0.023	0.262	1.000	1.484
310.000	1.398	0.707	0.392	0.986	1.343
360.000	1.513	0.186	0.202	1.056	1.451
410.000	1.451	0.416	-0.058	1.014	1.568
460.000	1.577	0.395	-0.188	1.028	1.544
510.000	1.568	-0.125	-0.668	1.056	1.725